

## 07.1—105      Inspection and adjustment of no-load max speed

### Test values

Model	Engine	Injection pump abbreviation	Max speed no-load (end of governed speed) 1/min
115.1	615, 616	M	5200—5400
	617	MW	4700—5200
123.1	615, 616	M	4800—5200
	616, 617	MW	4700—5200
	615, 616, 617	M/RSF	4900—5200

### Special tools

Oil telethermometer



116 589 27 21 00

Adaptor for revolution counter



616 589 00 63 00

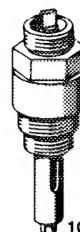
### Conventional tool

Revolution counter, mechanical with hexagonal adaptor

e.g. made by Gann, D-7000 Stuttgart 1

### Testing

1 Connect revolution counter.  
Use adaptor when connecting mechanical revolution counter.



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- 2 Run engine to 75–85 °C oil temperature.
- 3 Slowly accelerate with accelerator pedal and read revolution counter. Specified engine speed should be attained.

#### **Adjustment (M-injection pump with pneumatic governor)**

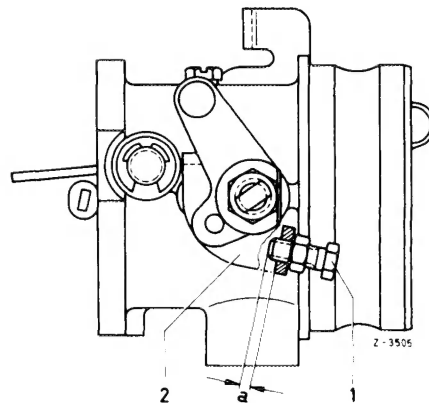
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- 4 Adjust speed by means of full load stop screw (1) on throttle unit.

Screwing in = speed decrease

Screwing out = speed increase

- 1 Full load stop screw
- 2 Regulating lever
- a = Adjustment max 2 mm



Adjustment ("a") of throttle valve should not exceed max 2 mm.

If the full load stop screw is screwed in still further, the air feed will be throttled and driving performance will drop.

If the throttle unit can no longer be adjusted, tension or slacken governor spring by means of compensating washers (07.1–130).

- 5 If the respective speed is not attained on MW and M/RSF-injection pumps, check for presence of vacuum at vacuum box on injection pump. For this purpose, pull off hose on vacuum box. If the speed is still not attained, remove injection pump and adjust maximum speed free of load on a Bosch injection pump test bench.